

Notice of Allowability

Application No.

10/531,969

Examiner

Sam Rizk

Applicant(s)

LAMY, CATHERINE

Art Unit

2133

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 7/17/2006.
2. ☒ The allowed claim(s) is/are 1,3.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____


GUY LAMARRE
PRIMARY EXAMINER

DETAILED ACTION

- Response to the applicant's amendment dated 7/17/2006
- Claim 2 have been Cancelled
- Amended claims 1 have been submitted for examination
- Added new claim 3
- Claims 1 and 3 have been allowed

Double Patenting

1. In view of the applicant remarks, see page 6, filed on 7/17/2006, the copending application no. 10/548,250 was filed subsequent to the filing of the instant application, double patenting rejection is withdrawn.

Claim Rejections - 35 USC § 112

2. In view of the applicant amended claim 1 and cancelled claim 2, the claim rejections under section 35 USC § 112 are withdrawn.

Drawings Objections

3. In view of the applicant amended drawings filed on 7/17/2006, all objections to the drawings are withdrawn.

EXAMINER'S AMENDMENT

An examiner's amendment to the record attached to this office. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

4. Authorization for this examiner's amendment was given in a telephone interview with attorney Gregory L. Thorne on 12/20/2006.

5. Replace claim 1 to read:

"A method of transmitting signals comprising the steps of:

- receiving signals to be transmitted;
- source encoding said signals to build a variable length error code;
channel encoding the variable length error code; and
- transmitting the channel encoded variable length error code,
- wherein said step of source encoding said signals to build the variable
length error code, comprises the sub-steps of:"

(1) initializing the needed parameters : minimum and maximum length of codewords L_1 and L_{\max} respectively, free distance d_{free} between each codeword (said distance d_{free} being for a VLEC code C the minimum Hamming distance in the set of all arbitrary extended codes), required number of codewords S ;

(2) generating a fixed length code C of length L_1 and minimal distance b_{\min} , with $b_{\min} = \min (b_k ; k = 1, 2, \dots, R)$, b_k = the distance associated to the codeword length L_k of code C and defined as the minimum Hamming distance between all codewords of C with length L_k , and R = the number of different codeword lengths in C , said generating step 11 creating a set W of n -bit long words distant of d ;

(3) listing and storing in the set W all the possible $L1$ - tuples at the distance of d_{min} from the codewords of C (said distance d_{min} for a VLEC code C being the minimum value of all the diverging distances between all possible couples of different-length codewords of C , and, in the case where no word is found or the maximum number of bits is reached, reducing a constraint of distance for finding more words and deleting one or more codewords of a last group, otherwise doubling the number of words in W by affixing at the end of all words one extra bit, said storing step therefore replacing the set W by a new one having twice more words than the previous one and the length of each one of these words being $L1 + 1$;

(4) deleting all the words of the set W that do not satisfy the c_{min} distance. With all codewords of C , said distance c_{min} being the minimum converging distance of the code C ;

(5) in the case where no word is found following acts 3 and 4, deleting codewords of the last group, otherwise controlling that all words of the set W are distant of b_{min} , the found words being then added to the code C ;

(6) if the required number of codewords has not been reached, repeating the acts (1) to (5) until the method finds either no further possibility to continue or the required number of codewords has been reached;

(7) if the number of codewords of C is greater than S calculating, on the basis of the structure of the VLEC code, the average length AL obtained

by weighting each codeword length with the probability of the source, said AL becoming the ALmin, if it is lower than ALmin, with ALmin= the minimum value of AL, and the corresponding code structure being kept in memory ; said building method being moreover such that at most one bit is added at the end of each word of the set W.

6. Change claim 3, line 1 the "A computer configured " to "A computer program stored on a computer readable medium to cause a computer configured".

Response to Arguments

7. Applicant's arguments and amended claim 1 filed on 7/17/2006, with respect claim 1 have been fully considered and are persuasive. Claim 1 rejections under section 35 USC § 102(a) of the office action filed on 4/18/2006 has been withdrawn.

REASONS FOR ALLOWANCE

The following is an examiner's statement of reasons for allowance:

8. The prior Art of record and, in particular Applicant admitted Prior Art (AAPA) do not teach, suggest, or otherwise render obvious the limitation cited in claim 1:
 - listing and storing in the set W all possible L1 - tuples at the distance of dmin from the codewords of C, said distance dmin for a VLEC code C being the minimum value of all -diverging distances between all possible couples of different-length codewords of C and, in the case where no word is found or the maximum number of bits is reached,

reducing a constraint of distance for finding more words and deleting one or more codewords of a last group, otherwise doubling the number
of words in W by affixing at the end of all words one extra bit, said
storing act therefore replacing the set W by a new one having twice
more words than the previous one and the length of each one of these
words being $L1 + 1$;

9. Claim 3 has similar language as in claim 1.

Conclusion

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sam Rizk whose telephone number is (571) 272-8191. The examiner can normally be reached on M-F 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Albert Decady can be reached on (571) 272-3819. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

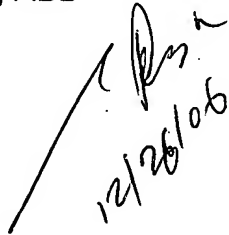
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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronics Business Center (EBC) at 866-217-9197 (toll-free)

Sam Rizk, MSEE, ABD

Examiner

ART UNIT 2133


12/26/06